

Appl. No. : 09/944,903
Filed : August 30, 2001

REMARKS

With this amendment, Claims 1-18 are pending in the present application. Claim 1 has been amended. In view of the foregoing amendments and the following remarks, Applicant respectfully requests reconsideration and allowance of this application.

Advisory Action

In the Advisory Action, the Examiner indicated that the proposed amendments in the Office Action Response submitted May 23, 2003 will not be entered because they raise new issues that would require further consideration and/or search. Specifically, the Examiner pointed out that the scope of independent Claim 1 has been broadened by the deletion of the limitation regarding a contact fill comprising titanium nitride. By this paper, Applicant has re-added the titanium nitride contact fill limitation to Claim 1. Accordingly, Applicant respectfully requests reconsideration of the pending claims in view of the following remarks.

Claim Rejections-35 U.S.C. §103

The Examiner rejected Claims 1-18 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,773,363 to Derderian et al. in view of U.S. Patent No. 5,963,832 to Srinivasan et al., U.S. Patent No. 6,333,547 to Tanaka et al., and U.S. Patent No. 5,756,394 to Manning. However, after carefully reviewing each of these references, Applicant notes that none of the references either individually or in combination is directed toward reducing the consumption of silicon from the junction area of the substrate during the silicidation process as disclosed in the pending claims.

One novel aspect of Applicant's invention is directed toward a contact structure that reduces the consumption of silicon from the junction area during the silicidation process as well as utilizes titanium nitride as a contact fill. In particular, Applicant discloses an integrated circuit having a conductive contact layer that has pre-formed titanium silicide interspersed in the layer so as to reduce the consumption of silicon from the junction regions of the substrate. (*See, e.g.,* Claims 1 as amended and Claim 10)

Applicant notes that Derderian appears to disclose a contact structure in which the titanium silicide layer is formed by reacting titanium with silicon from the junction region of the substrate. (*See, e.g.,* Column 5, Lines 30-34) Moreover, Applicant also notes that none of the other references cited by the Examiner appears to teach or suggest a contact structure wherein the

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titanium silicide layer in the contact structure contains a conductive contact layer that substantially reduces consumption of silicon in the junction region. Accordingly, Applicant respectfully requests that the rejection of the claims over these references be withdrawn.

CONCLUSION

In view of the foregoing, Applicant respectfully submits that all pending claims of the present application are in condition for allowance, and such action is earnestly solicited. Should there be any impediment to the prompt allowance of this application that could be resolved through a telephone conference, the Examiner is respectfully requested to call the undersigned at the number shown below. Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: 7/21/2003

By: 
Linda H. Liu
Registration No. 51,240
Attorney of Record
Customer No. 20,995
(909) 781-9231

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